LESSON PLAN

SUB: PROGRAMMING WITH PYTHON LAB
BRANCH:- COMPUTER SCIENCE& ENGG.
SEMESTER:3rd
NAME OF FACULTY: SOUDAGAR JENA (GF in CSE)

GOVERNMENT POLYTECHNIC, BHADRAK

SESSION: 2025-26

Hod ,CSE

Academic Co-ordinator

Academic Co-ordinator

Principal
Govt. Polytechnic, Bhadrak

DEPARTMENT OF Computer Science & Engg.,

Discipline: Computer Sc. & Engg.	Semester: 3rd Winter-2025	Name of the Faculty: SOUDAGAR JENA
Subject: PYTHON PROGRAMMING LAB	No. Of Days/Week Class Allotted- 4	Semester From Date:14/07/2025 ToDate:15/11/2025 No. of Weeks:15
Week	Class Day	Theory Topics
1st	1st	Install Python and set up an IDE (e.g., PyCharm, VS Code, Jupyter, Spyder)
	2nd	Install Python and set up an IDE (e.g., PyCharm, VS Code, Jupyter, Spyder)
2nd	1st	Write simple Python scripts to demonstrate variable declarations
	2nd	Data types, and operators
3rd	1st	Debug Python scripts to identify and fix errors.
	2nd	Implement conditional statements (if, else, elif) in real-life scenarios
4th	1st	Implement conditional statements (if, else, elif) in real-life scenarios
	2nd	Write programs using loops (for, while, and nested loops) to solve repetitive tasks
5th	1st	Define custom functions, including examples of recursion, use lambda functions for inline operations.
	2nd	Perform CRUD operations on lists, tuples, sets, and dictionaries, use list comprehensions to filter and transform data
6th	1st	Perform string manipulations using built-in methods
	2nd	Perform string manipulations using built-in methods
7th	1st	Introduce Python's collections module with practical examples.
	2nd	Write programs to read, write, and append text files
8th	1st	Work with CSV files using Python's csv module
	2nd	Read and write JSON files to store structured data

9th	1st	Read and write JSON files to store structured data
	2nd	Explore built-in modules like os, math, and datetime, create and import custom modules.
10th	1st	Explore built-in modules like os, math, and datetime, create and import custom modules.
	2nd	Define classes and create objects with attributes and methods
11th	1st	Define classes and create objects with attributes and methods
	2nd	Define classes and create objects with attributes and methods
12th	1st	Implement encapsulation, inheritance, and polymorphism
	2nd	Implement encapsulation, inheritance, and polymorphism
13th	1st	Work with magic methods (e.g., init , str) and operator overloading,
	2nd	Write programs to handle exceptions using try, except, and finally.
14th	1st	Write programs to handle exceptions using try, except, and finally.
	2nd	Use NumPy for numerical operations and Pandas for data analysis
15th	1st	Use NumPy for numerical operations and Pandas for data analysis
	2nd	Mini-Project: Develop a Python script to solve a real-world problem (e.g., a data analysis script, a file organizer, or a basic web scraper).

Signature of Faculty